Utilization of E-Learning System for Innovative Methods Implementation in Humanities Pedagogy

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ABSTRACT

The article presents the results of the research on e-learning system utilization at Borys Grinchenko Kyiv University by humanities students and teachers. Digitalization of humanities pedagogy is an integral part of the educational process today and e-learning systems belong to the most powerful digital instruments used at higher education institutions. Therefore, the topic of digital humanities implementation in existing at universities e-learning systems is high on the agenda. In particular, attention should be paid to the possibility of innovative teaching methods utilization with the help of the e-learning system resources. The authors focus on the capabilities of LMS Moodle for implementation of collaboration, flipped classroom technology, peer assessment and project-based learning. Utilization of such activities as Workshop, Wiki, Google Meet for Moodle as well as instruments and settings (embedded video, group submission) for implementation of innovative teaching methods are considered. The correlation between the request of humanities teachers and students and Moodle LMS options for its implementation is shown.Increased use of the e-learning system for innovative teaching methods provision is highlighted as a development area for humanities teachers.

CCS CONCEPTS

• **Human-centered computing** → **Empirical studies in collaborative and social computing**;

KEYWORDS

E-learning system, Moodle, Digital humanities, Innovative methods of teaching, Collaboration, Fipped classroom, Project based learning

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1 INTRODUCTION

Digital humanities are one of the cutting edge knowledge spheres that combine digital science and humanities. Having started their history around 40 years ago from creating digital archives and databases for texts, art pieces and other materials, they developed into wider and more integrated usage including communication and collaboration, computer-based statistical analysis, search and retrieval, topic modelling, and data visualization [2].

Thanks to the design and utilization of new software and teaching techniques, digital humanities allow the implementation of new teaching methods that combine digitalization and cultural heritage study [13]. At the same time, the proportion of distant learning in higher education grows, which brings up the issue of digital humanities and e-learning combination [4].

Taking into consideration the importance of e-learning for higher education institutions and e-learning systems for arrangement and maintenance of educational process in particular, scientists started to pay attention to the above-mentioned issue. For example, Teixeira et al. [12] with co-authors analyse capabilities of Blackboard for digital humanities implementation, Shakil et al. [11] address the problems of e-learning in digital humanities pedagogy. However, digital education environment often borrows the teacher-centred model typical for traditional classroom learning where little attention is paid to students' collaboration, peer review and opportunities for students to build their own educational trajectory [10].

We focus our attention on the capabilities of the e-learning system for innovative teaching methods based on the case of Borys Grinchenko Kyiv University (BGKU). The novelty is represented by the analysis of less commonly used Moodle activities for implementation of digital humanities pedagogy methods. In particular, the e-learning system activities are being considered in the context of blended learning (flipped classroom), formative assessment, project-based learning implementation.

The survey taken as a background for the research has shown that humanities teachers use the e-learning system to provide innovative teaching methods. However, the activities used for that are very limited. Thus, the question of increased use of the system is of high interest.

2 E-LEARNING SYSTEM DESCRIPTION

The e-learning system plays an important role in the educational process at Borys Grinchenko Kyiv University. Based on the students survey results, where 168 respondents from five different institutes/faculties took part, 78% of the surveyed students noted that they constantly use the e-learning system and 15,5% of the students gave the answer "often" to the question (figure 1).

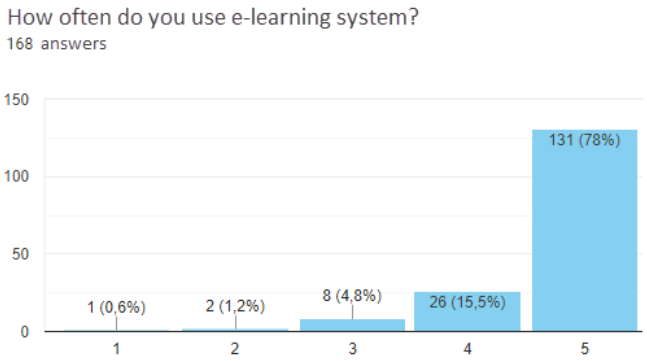

Figure 1: Frequency of the e-learning system usage by students.

Similar results were shown in the survey of the university teachers, where 126 respondents from seven structural institutions of the university with humanities specialities took part – Institute of Human Sciences, Institute of Journalism, Institute of Philology, Pedagogical institute, Institute of Arts, Faculty of History and Philosophy and Faculty of Law and International Relations. 80,2% of the respondents answered that they constantly use the e-learning system and 12,7% of surveyed teachers noted that they often work in the e-learning system (figure 2).

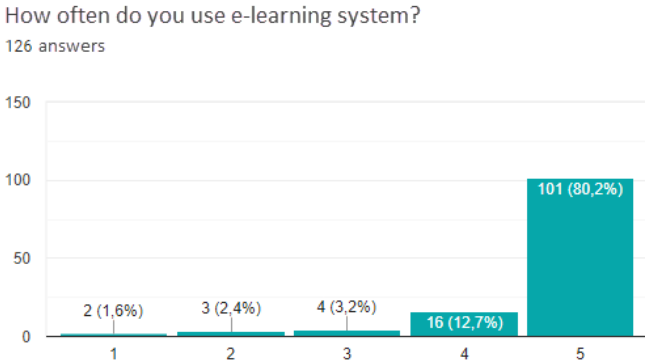

Figure 2: Frequency of the e-learning system usage by teachers.

Similar to many other higher education institutions, at Borys Grinchenko Kyiv University LMS Moodle is used for e-learning arrangement as it is an open source system and has many capabilities to be adopted to the needs of the higher education institution [8]. With the beginning of the COVID-19 pandemic when education had to move online mostly, the e-learning system of the university has been modernized in the way so that it could provide for the needs of all educational process participants at its best [3, 7]. In particular, the arrangement of electronic learning courses (ELC) according to the educational programs was introduced, which organises access of students to the information important for them according to the results of the survey including arrangement of academic disciplines by semesters, forms of control in each semester, links to ILCs that support each discipline and progress information on all subjects (figure 3).

Besides, in Dashboard the following blocks are added: Schedule, Tools for communications, Tools for collaboration, E-portfolio, University library, Scientific publications search, etc. Both students and teachers mark them useful for educational process organization (figure 4, 5).

Among the main advantages of e-learning system utilization there is access at any time and at any location, possibility to gather all learning materials at one place, statistical data on progress and results of the educational process. We widened them with possibilities to arrange communication and collaboration from Dashboard thanks to the blocks of the same name as well as with additional resource Google Meet for Moodle in ELC. Communication and collaboration are important parts of the educational process for humanities in particular. Teaching with the accent on collaboration allows a teacher to shift the focus from teacher-centred work model to student-centred where a teacher acts more like a facilitator than as a lecturer. At the same time, such approach allows gaining knowledge not only from the lecturer but also from the process of work with peers [6].

The resource Google Meet for Moodle makes it possible to arrange one time sessions as well as regular online meetings (figure 6, 7) with the help of corresponding settings. Links to the recordings of the conferences are saved in the resource added to the ELC that provides students and teachers with the possibility to return to it when needed.

The e-learning system of the university is not only a storage for learning materials. It is an important element of educational process arrangement, in particular, in teacher-student interaction and communication in assignments, collection and demonstration of statistical data including students' progress in ELC. The survey shows that the e-learning system is not very frequently used as a source of links to online lessons, but more than a half of the surveyed students interact with ELCs materials and 84,5% of respondents constantly submit assignments in ELCs (figure 8, 9).

At the same time, the data of the surveys of both teachers and students show that the e-learning system is not frequently used for communication. It is confirmed by the choice of activities and resources for work in ELC, where teachers prefer Assignments, Lessons, Quizzes, Pages, Files and URLs (figure 10).

That is why the authors see mastering tools that allow increasing the level of communication and collaboration in ELCs as a perspective and important direction of university teachers' digital competence development. This coincides with the teachers' need in training as 63,5% of teachers marked the activity Workshop as the one which requires additional training (figure 11).

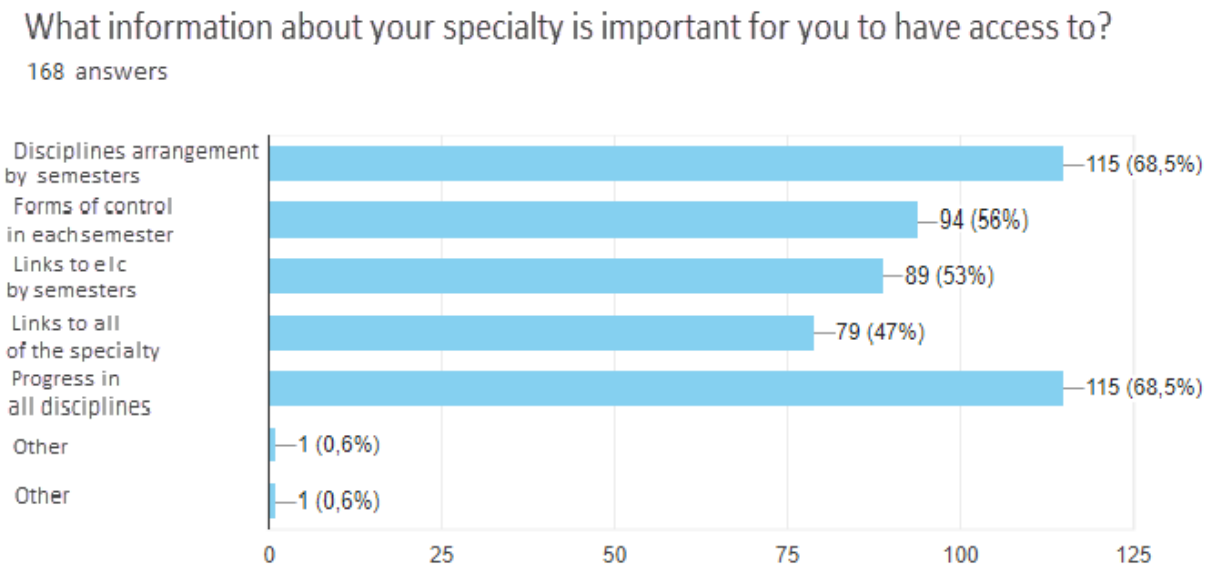

Figure 3: Important information in the e-learning system for students.

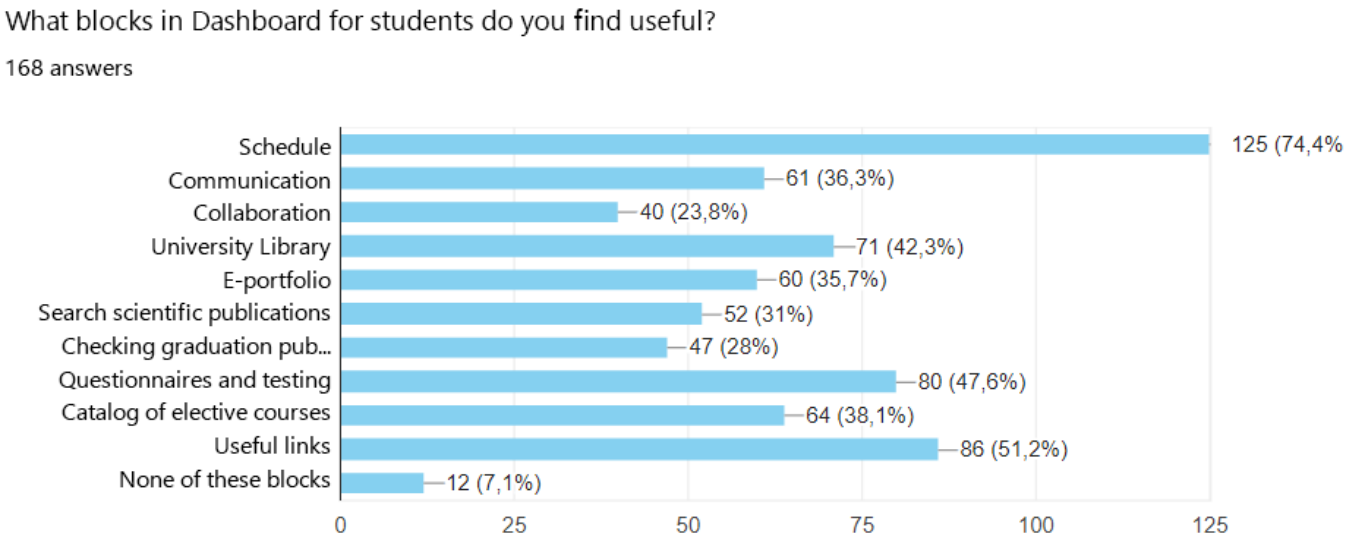

Figure 4: Useful blocks in Dashboard for students.

3 EXAMPLES OF INNOVATIVE TEACHING METHODS IMPLEMENTATION

Activities and resources of LMS Moodle applied at BGKU e-learning system allow implementation of such innovative teaching methods as blended learning, problem-based learning, project-based learning, formative assessment, gamification, case method, etc.

Formally, a humanities workshop is already “flipped”. The way used for arrangement of an interactive “flipping” for technical disciplines is a usual lesson for humanities [1]. That is why implementation of such learning activities in the e-learning system is an important part of humanities pedagogy digitalization.

Most activities and resources of LMS Moodle allow implementation of flipped classroom pre-phase with the help of embedded video (figure 12).

According to the teachers survey more than a half of respondents use blended learning in their pedagogical practice (figure 13). However, the activities they use for this purpose are mostly limited to Assignments and Lessons (figure 14).

Utilization of other activities could expand teachers’ possibilities in the educational process arrangement. Thus, the activity Workshop allows teachers to implement both “flipped” classroom method and peer-to-peer assessment. Work with the activity Workshop has several phases: the setup phase, the submission phase, the

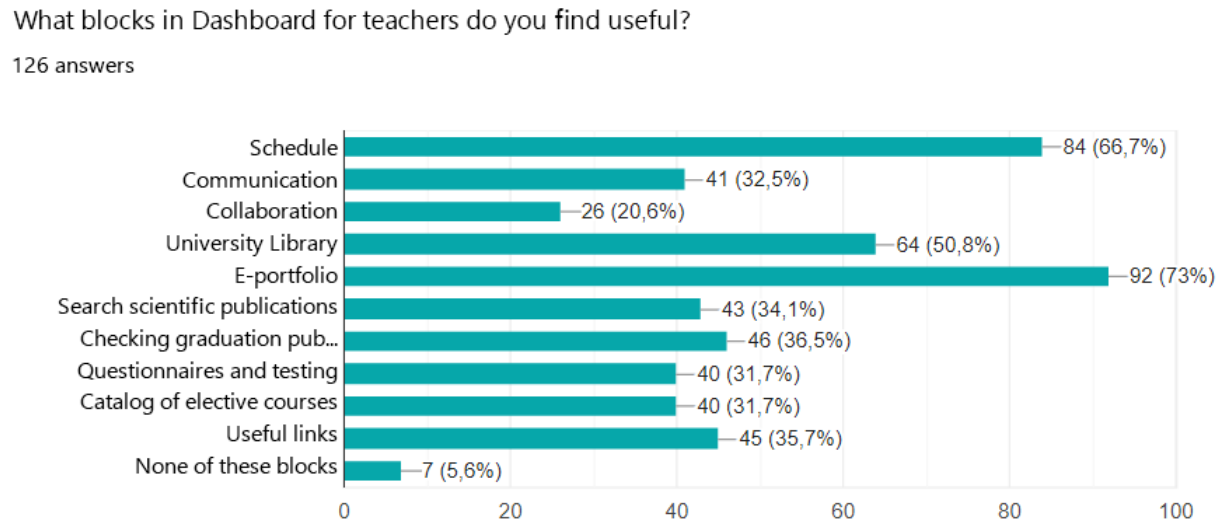

Figure 5: Useful blocks in Dashboard for teachers.

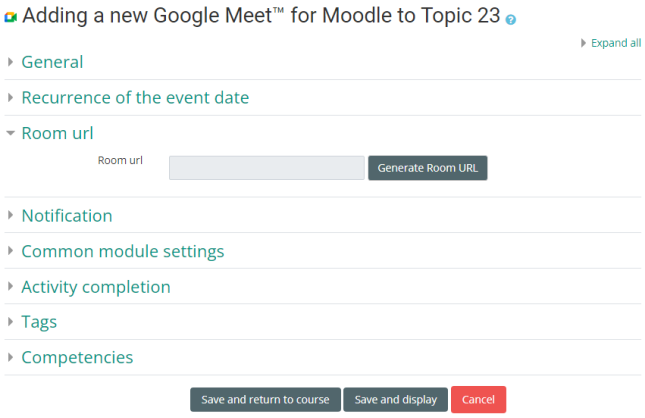

Figure 6: Google Meet for Moodle settings.

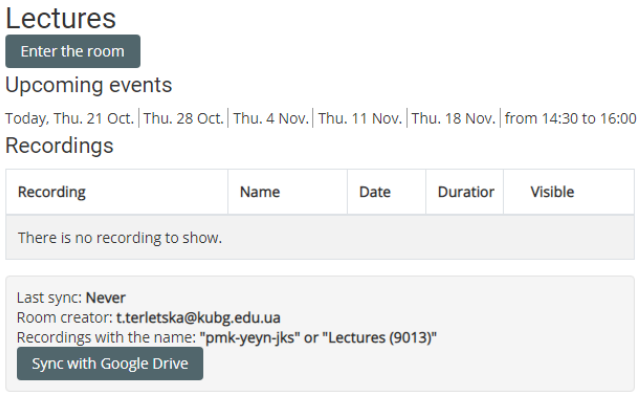

Figure 7: Google Meet for Moodle multiple times meeting added to ELC.

assessment phase, the grading evaluation phase and the closure (figure 15). While arranging blended learning, a teacher can give materials for self-study (including video, texts, graphic materials, links, etc.) at the first phase and the other phases can be fulfilled during the lesson (in the classroom or remotely) under the teacher's supervision. In this case it is very important to provide students with clear and detailed instructions for the tasks and criteria for peers' work assessment.

According to the settings chosen by a teacher each student receives a set amount of assignments for assessment as well as similar amount of reviews for their own work. The activity allows setting anonymity of assessment which together with above-mentioned settings contributes to the objectivity of the assessment (figure 16).

At the phase of grading evaluation the system compares the mark given by one student with those given by the other peers and considering the result it evaluates objectivity of the assessment (figure 17).

It is important to take into consideration formative and summative assessment differences while using Workshop activity to ensure corresponding assessment criteria settings. To the peculiarities of formative assessment [9] belong assessment of the learning process itself not limited to the products of educational activities; assessment criteria design based on set learning goals; students' participation in the assessment process; process character of assessment; utilization of digital instruments for assessment; absence of open comparison of different students' results.

The Workshop activity can be used for implementation of summative assessment in the form of peer assessment. The peculiarities of peer assessment include strictly defined assessment criteria; assessing each other by students; receiving a note not only for performed work but also for objectiveness of assessment; high efficiency of activities.

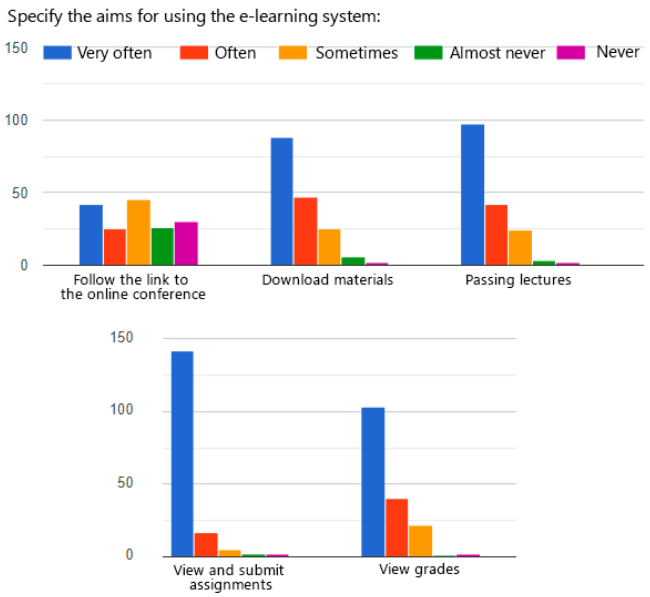

Figure 8: Aims of e-learning system usage (students).

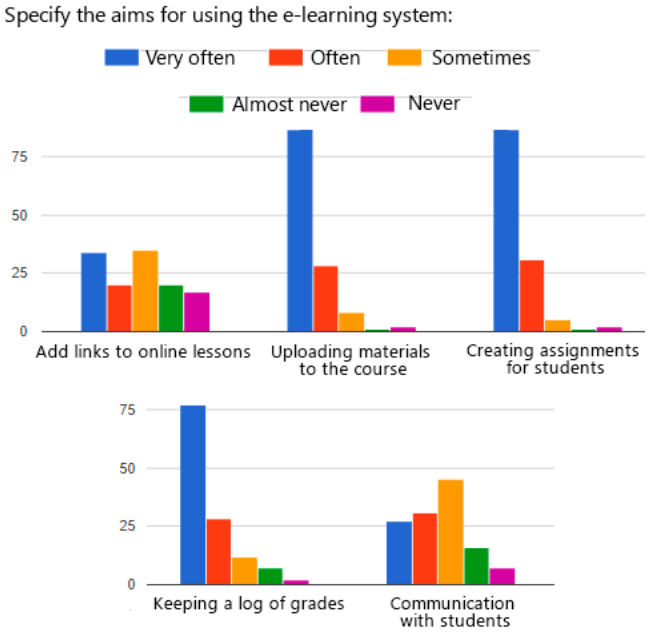

Figure 9: Aims of e-learning system usage (teachers).

The following methods of formative assessment can be implemented with the help of Moodle activities and resources: social recommendation and community participation (peer assessment, learning groups, network social mechanisms, peer review, peer reflection, peer assistance, peer learning, benchlearning), self-assessment according to the set criteria (responsive evaluation, formative evaluation, stakeholder participation).

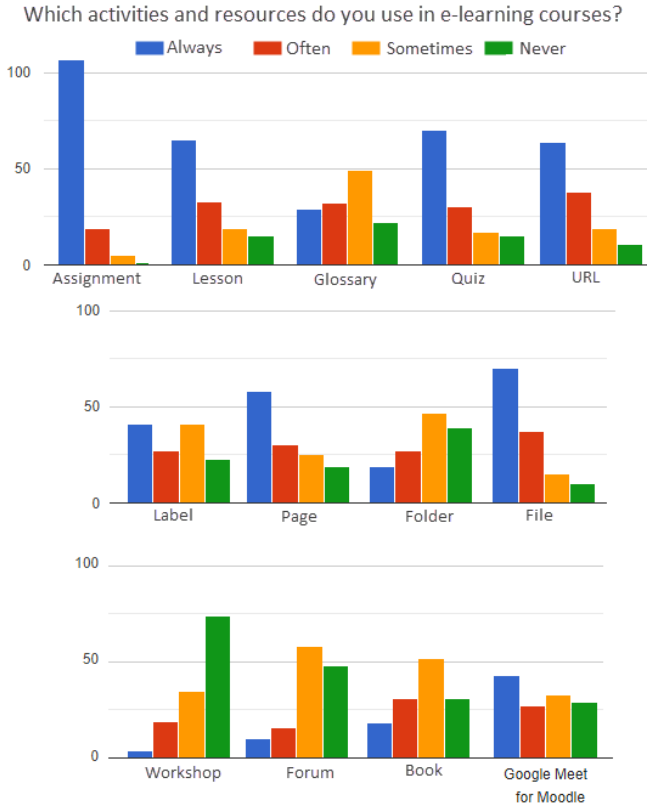

Figure 10: Activities and resources used by teachers.

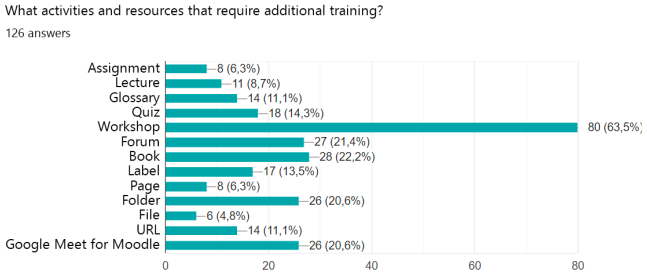

Figure 11: Activities and resources that require additional training.

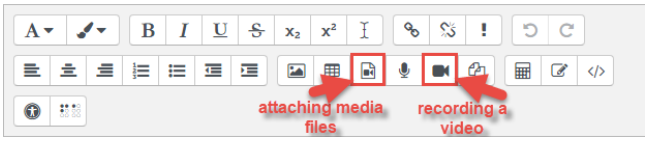

Figure 12: Attaching video in LMS Moodle.

Another innovative method widely used by teachers is project-based learning. Implementation of project-based learning in teaching humanities contributes to cultural and global competencies

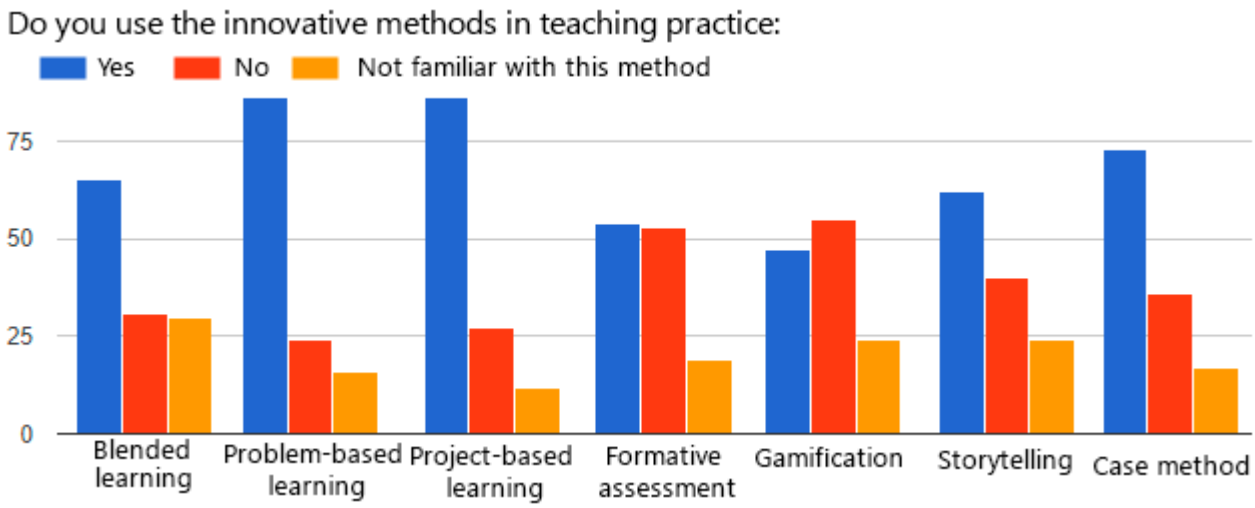

Figure 13: Innovative methods used by teachers.

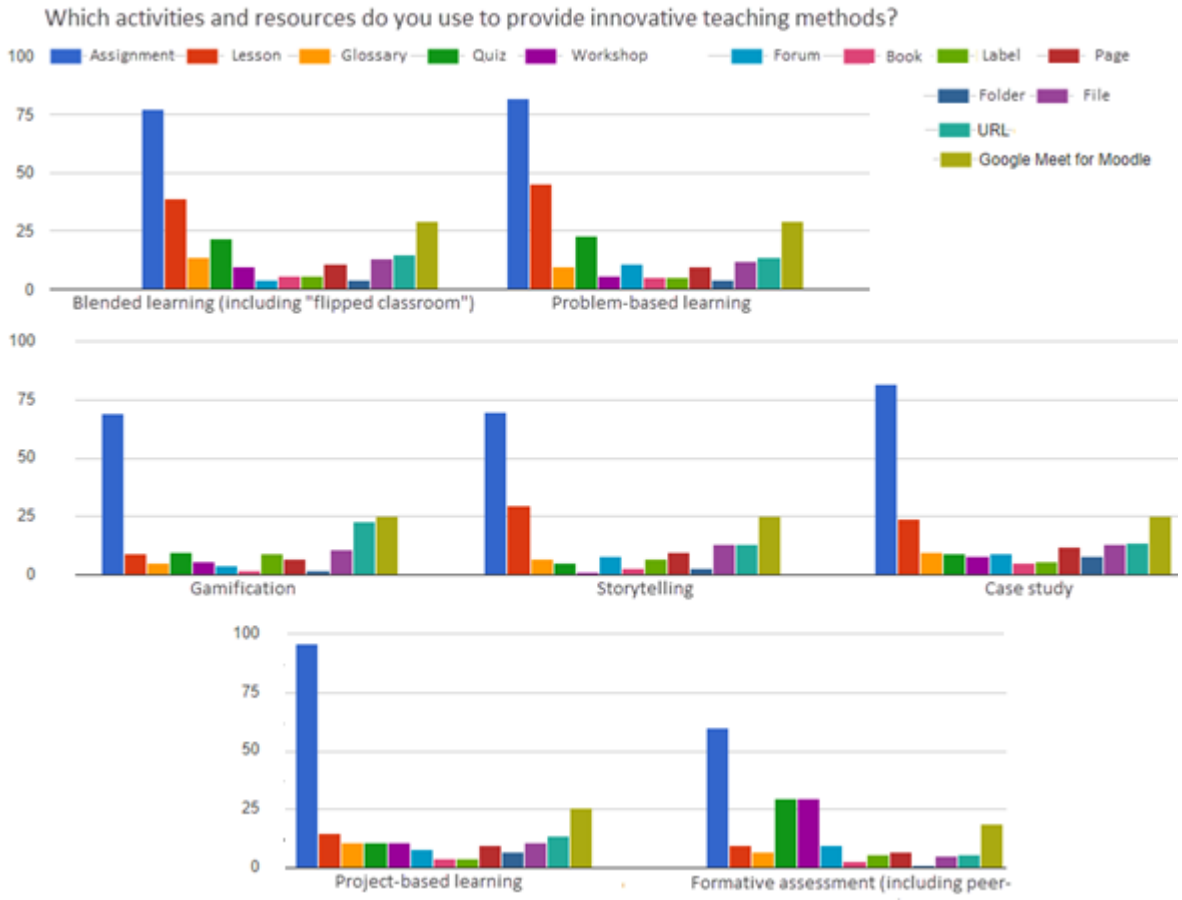

Figure 14: Activities and resources used for innovative.

development and also plays an important role in forming student-centred educational space [5]. The e-learning system at BGKU has various options for arrangement of project-based learning, for example, activities Wiki, Forum, Assignment, etc.

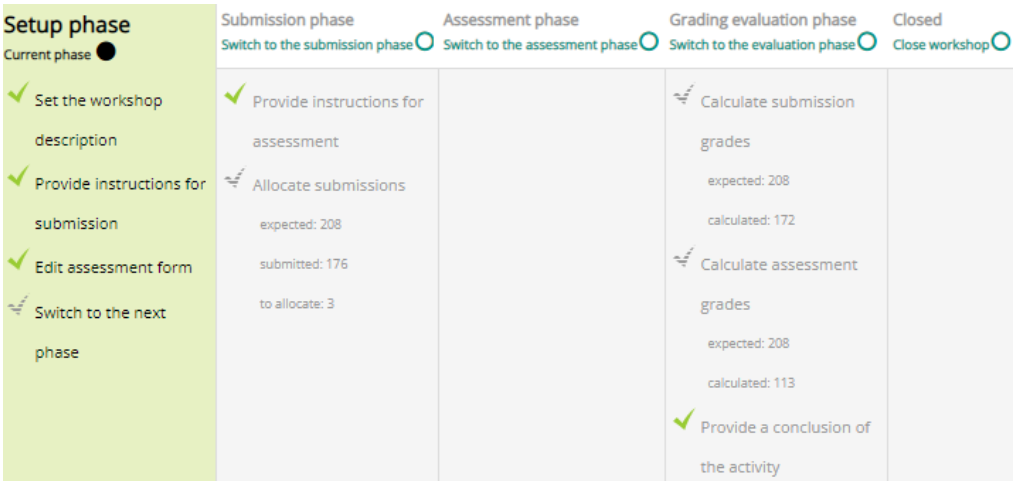

Figure 15: Phases of work.

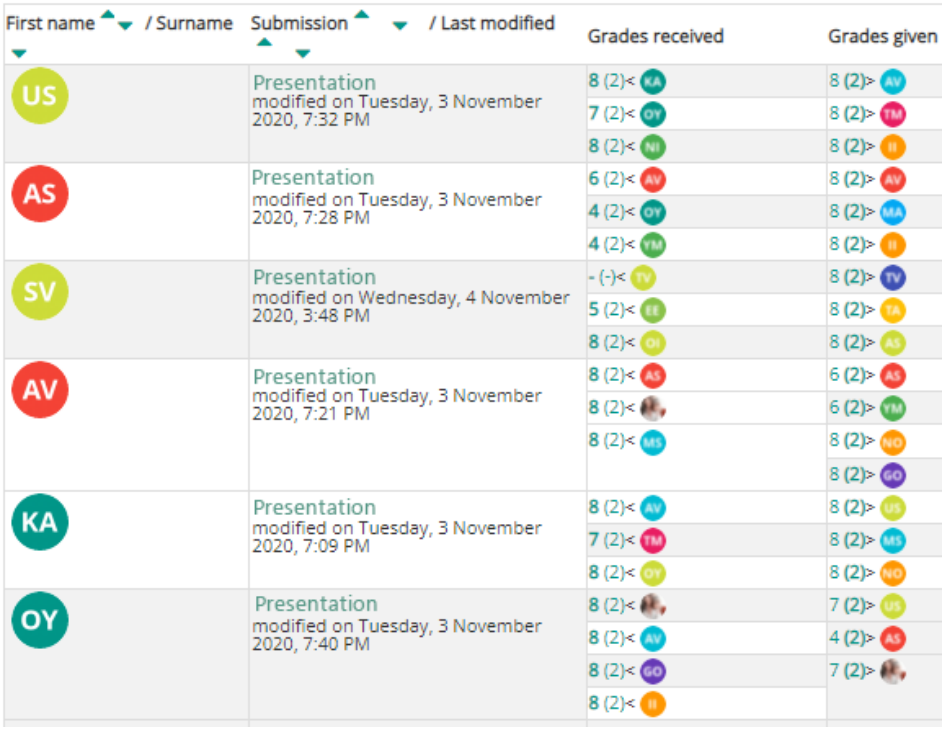

Figure 16: Results of assessment.

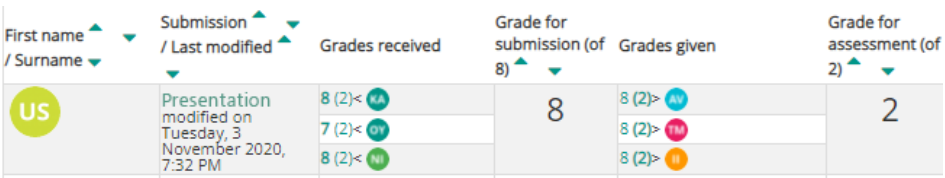

Figure 17: Grading evaluation.

The activity Wiki allows creating group projects in the mode Collaborative wiki (figure 18, 19), where each participant of the defined group can create and edit pages, add comments, files, and track history of changes.

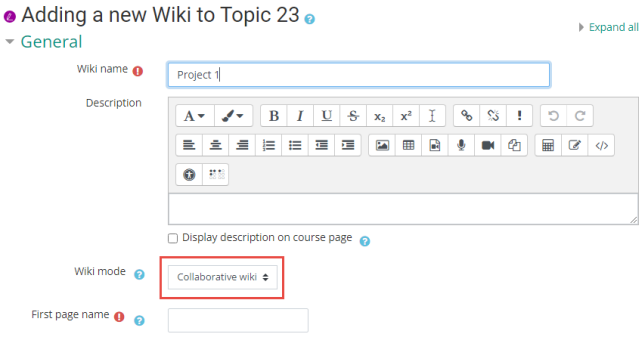

Figure 18: Settings of Wiki.

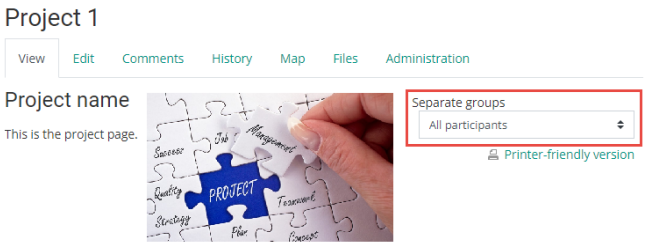

Figure 19: Wiki project.

The ways of wiki-technology usage for project activity support are: writing library-research papers (reports) – abstract for a paper, report analysis, evaluation/assessment; compilation of bibliography for a topic – annotated list of Internet resources; making a terms glossary for a topic; performing descriptive work; making instruction for performing operations; discussions on the level of a group/speciality; comparative analysis of different authors approaches to tasks or problems; systems classification design by the defined characteristics; defining criteria for events, phenomena, processes evaluation; projects presentation; group work and team project work, etc [14].

The activity Assignment has settings for group submission of performed tasks where the grade is given to all participants of the group for a finished project and an assignment can be submitted by each student separately or by a representative of a group for all group members at once (figure 20).

4 CONCLUSION AND FURTHER RESEARCH PERSPECTIVES

The E-learning system is an integral part of the educational process at a university today. That is why shifting its role from a place for data storage to a tool that can be used by teachers for implementation of innovative teaching methods is a logical step in digitalization of education. The experience of BGKU has shown that teachers

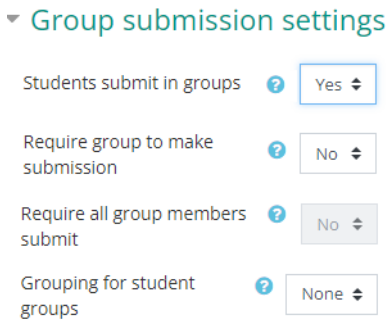

Figure 20: Assessment settings for project (group) work in Assignment.

actively use blended learning, problem-based learning, formative assessment and other methods in their teaching practice. However, they require additional training for wider usage of LMS Moodle tools. Such activities as Workshop, Wiki, Assignment, Google Meet for Moodle have high potential for implementation of innovative teaching methods especially under the conditions of distance learning and they should not be ignored in the process of postgraduate teachers education.

The research carried out in the framework of the article can be used as a basis for planning and designing further teacher training on utilization of the e-learning system activities and resources for innovative teaching methods implementation.

REFERENCES

[1] Kathi Inman Berens. 2014. Double Flip: 3 Insights Flipping the Humanities Seminar. *Hybrid Pedagogy* (23 Jan. 2014). https://hybridpedagogy.org/double-flip-3-insights-flipping-humanities-seminar/

[2] David M. Berry. 2019. What are the digital humanities? https://www.thebritishacademy.ac.uk/blog/what-are-digital-humanities/

[3] Oksana Buinytska, Liliia Varchenko-Trotsenko, Tetiana Terletska, and Dariia Nastas. 2020. Modernization of electronic learning system of the university to the needs of the participants of the educational process. *Open Educational E-Environment Of Modern University* 9 (2020), 1–14. https://doi.org/10.28925/2414-0325.2020.9.1

[4] Rebecca A. Croxton. 2020. E-Learning in the Digital Humanities: Leveraging the Internet for scholarship, teaching and learning. In *Routledge International Handbook of Research Methods in Digital Humanities* (1st ed.), Kristen Schuster and Stuart Dunn (Eds.). Routledge. https://doi.org/10.4324/9780429777028

[5] A. Dominguez. 2016. Project based learning in the humanities: creating discourse and building cultural competence in the global university. In *ICERI2016 Proceedings* (Seville, Spain) *(9th annual International Conference of Education, Research and Innovation)*. IATED, 8685–8693. https://doi.org/10.21125/iceri.2016.0962

[6] Amanda Licastro, Katina Rogers, and Danica Savonick. 2020. Collaboration. In *Digital Pedagogy in the Humanities: Concepts, Models, and Experiments*, Rebecca Frost Davis, Katherine D. Harris, and Jentery Sayers (Eds.). https://digitalpedagogy.mla.hcommons.org/keywords/collaboration/

[7] Nataliia Morze, Oksana Buinytska, Liliia Varchenko-Trotsenko, Svitlana Vasylenko, Dariya Nastas, Anastasiia Tiutiunnyk, and Svitlana Lytvynova. 2022. System for digital professional development of university teachers. *Educational Technology Quarterly* (Feb. 2022). https://doi.org/10.55056/etq.6

[8] N Morze, L Varchenko-Trotsenko, T Terletska, and E Smyrnova-Trybulska. 2021. Implementation of adaptive learning at higher education institutions by means of Moodle LMS. *Journal of Physics: Conference Series* 1840, 1 (mar 2021), 012062. https://doi.org/10.1088/1742-6596/1840/1/012062

[9] Nataliia Morze, Viktoriia Vember, and Liliia Varchenko-Trotsenko. 2017. Formative and Peer Assessment in Higher Education. In *E-learning*, Eugenia Smyrnova-Trybulska (Ed.). Vol. 9, Effective Development of Teachers' Skills in the Area of ICT and E-learning. Studio Noa for University of Silesia, Katowice - Cieszyn, 159–179. https://depot.ceon.pl/handle/123456789/15109

[10] Danica Savonick and Lisa Tagliaferri. 2017. Building a Student-Centered (Digital) Learning Community With Undergraduates. *Digital Humanities Quarterly (DHQ)*

11, 3 (2017). http://www.digitalhumanities.org/dhq/vol/11/3/000306/000306.html

[11] Rafraf Shakil, Tapti Roy, and Kumar Gautam Anand. 2020. E-Learning in Humanities. *Journal of critical reviews* 7, 9 (2020), 1325–1328. https://www.bibliomed.org/mnsfulltext/197/197-1593639086.pdf

[12] Marcelo Mendonça Teixeira, Cristiane Domingos de Aquino, Marcos Vinícios S. de Alcântara, Anderson Sena dos Santos, Jaziel Victor de Souza, Cícero Antônio de Morais, Wellington Pereira dos Santos, André Correia dos Santos, Edmar da Silva Medeiros, and Marcos Flávio da Silva Costa. 2019. E-learning Platforms: Digital Humanities. In *2019 14th Iberian Conference on Information Systems and Technologies (CISTI)*. 1–6. https://doi.org/10.23919/CISTI.2019.8760935

[13] Melissa Terras. 2012. Quantifying Digital Humanities. https://www.ucl.ac.uk/infostudies/melissa-terras/DigitalHumanitiesInfographic.pdf

[14] L. O. Varchenko-Trotsenko. 2017. *Wiki-technology as a means to support the project activity of students of humanitarian specialties of university.* Thesis for a candidate's degree by specialty 13.00.10 – information and communication technologies and education. Institute of Information Technology and Learning Tools of NAPS of Ukraine. http://lib.iitta.gov.ua/706160